

ABSTRACT

The present invention relates to a method of producing particles having a particle size of less than 100 nm and surface areas of at least 20 m²/g where the particles are free from agglomeration. The method involves synthesizing the particles within an emulsion having a 1-40% water content to form reverse micelles. In particular, the particles formed are metal oxide particles. The particles can be used to oxidize hydrocarbons, particularly methane.